

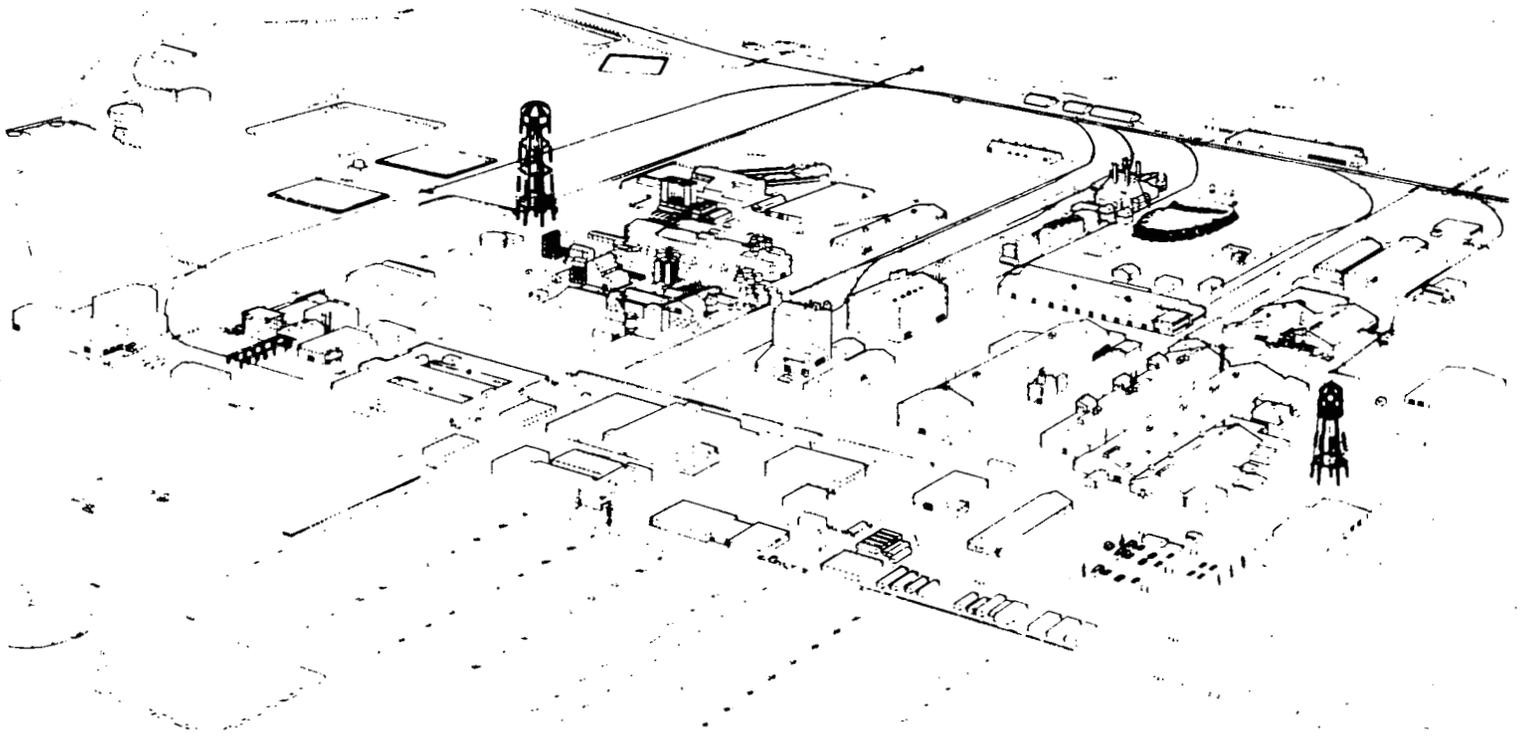
**RCRA PART B PERMIT APPLICATION SECTION
F: PROCEDURES TO PREVENT HAZARDS
VOLUME 7 OF 11
SEPTEMBER 22, 1990**

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**DOE-FMPC/USEPA
40
APPLICATION**

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RCRA PART B PERMIT APPLICATION



SEPTEMBER 22, 1989

SECTION F: PROCEDURES TO PREVENT HAZARDS

(Volume 7 of 11)

**FEED MATERIALS PRODUCTION CENTER
U.S. DEPARTMENT OF ENERGY
CINCINNATI, OHIO 45239-8705**

U.S. EPA IDENTIFICATION NO. 0H6890008976
OHIO EPA PERMIT NO. 05-31-0681

RCRA PART B
PERMIT APPLICATION

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SECTION F - PROCEDURES TO PREVENT HAZARDS

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SECTION F - PROCEDURES TO PREVENT HAZARDS

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**Part B Permit Application
Feed Materials Production Center
Fernald, Ohio**

The information provided in this section is submitted in accordance with the requirements of OAC 3745-50-44(A)(4) and 40 CFR Part 270.14(b)(4). Other regulations addressed to complete this section include OAC 3745-54-14, 3745-54-15, 3745-54-17, 3745-54-32, 3745-54-35, 3745-55-74, and 3745-54-76 (40 CFR 264.14, 264.15, 264.17, 264.32, 264.35, 264.174, and 264.176).

F-1 Security

F-1a Security Procedures and Equipment

In addition to the general security provisions of fencing, gates, and security officers discussed below, several other features contribute to the safety and security of the hazardous waste storage buildings. Ample lighting is provided throughout the site. Interplant two-way radios (which can be used to report abnormal conditions immediately) are required when entering a RCRA storage warehouse. An additional telephone system is used for communications outside the plant via the interplant two-way radios.

Employees are required to show identification badges when reporting for work. All visitors entering the plant must have an Access Request form completed and signed by a plant employee (Figure F-1). The pertinent information is then transferred to an Access Sheet (Figure F-2) which is in turn signed by the visitor upon his arrival to obtain a visitor's pass.

Security for the post-closure monitoring of Waste Pit No. 4 is discussed in Section I.

F-1a(1) 24-Hour Surveillance System

The FMPC site is monitored 24 hours a day by security offices on mobile and foot patrols. Entry into the facility is monitored through three controlled entry points (main gate, turnstiles, and the administration building) during normal working hours and access is only permitted through the main gate during non-working hours.

F-1a(2) Barrier and Means to Control Entry

F-1a(2)(a) Barrier

Except for the plant parking lot, the FMPC is a fully secure facility completely surrounded by a 7 feet high, 2-inch mesh chain-link fence topped by three strands of barbed wire. The facility's primary vehicular access is through the main gate located at the southern end of the facility, as described in Section B-4 and Figure B-14. Personnel access is limited to the main gate, turnstiles, and administration building during normal working hours. The main gate is manned 24 hours a day to control access. To prevent access during non-working hours, the turnstiles and administration building are locked.

F-1a(2)(b) Means to Control Entry

As discussed in Section F-1a(2)(a), the primary vehicular entrance to the plant is the main gate. This entry is controlled by a guard 24 hours a day.

Personnel access is controlled through the main gate, turnstiles, and administration building during normal working hours. Employees are required to present an identification badge when reporting to work. Visitors must sign a access sheet and obtain a visitor pass. The hazardous waste storage buildings are locked and visitors only escorted by personnel from Waste Operations and the Materials Control and Accountability Sections are permitted to enter them. By the practice stated above, unauthorized visitors also are prohibited from entering the RCRA storage buildings.

F-1a(3) Warning Signs

Signs which are legible from a distance of 25 feet are posted at all sides of the hazardous waste storage buildings. The signs state:

"Danger -- Authorized Personnel Only"

and

"Danger -- No Smoking or Open Flame"

Signs will be posted in a similar manner at the proposed RCRA, Plant 9 - Building 81, and Building 83X Storage Warehouses. No languages other than English are necessary for the signs at this plant.

F-1b Waiver

A waiver of the security procedures and equipment requirements is not requested by the FMPC at this time, therefore, this section does not apply to this permit application.

F-2 Inspection Schedule

The information provided in this section is submitted in accordance with the requirements of OAC 3745-50-44(A)(5) and 3745-54-14 (40 CFR Part 270.14(b)(5) and 264.15).

F-2a General Inspection Requirements

The FMPC conducts regular inspections of the hazardous waste storage buildings for the condition of the building, the safety and emergency equipment, roadways and traffic areas, and discharges that could cause or lead to the release of hazardous waste constituents to the environment or threaten human health. Deteriorations or malfunctions revealed by the inspection are remedied as soon as possible. Where a hazard is imminent, or has already occurred, remedial action is taken immediately in accordance with the Contingency Plan, Section G, of this permit application. Inspections are documented by recording results in a log. The log is maintained for a minimum of three years from the date of inspection. An example of the inspection log is given in Figure F-3. Inspection records include the following information:

1. Date of inspection
2. Time of inspection
3. Name of the inspector
4. Notation of the observations made
5. Date and nature of any repairs made or remedial actions taken.

F-2a(1) Types of Problems

Types of problems that may be encountered during inspections are described in FMPC procedures and listed on the inspection logs. Generally, the condition of each item is assessed,

checked for proper working order, or verified for sufficient stock of supplies.

F-2a(2) Frequency of Inspection

The frequency of inspections at the FMPC is based on the rate of possible deterioration of the equipment and the probability of an environmental or human health incident if deterioration goes undetected between inspections. The frequency of inspections at the FMPC conforms to accepted industry practices and RCRA guidance information.

The emergency and personnel protection equipment listed in Figure F-3 is inspected weekly. An inspection of the hazardous waste storage buildings takes place weekly. The loading areas (shipping docks) for hazardous waste are inspected daily during use.

F-2b Specific Process Inspection Requirements

F-2b(1) Container Inspection

The containers and the container storage areas are inspected weekly and prior to shipment off-site. An example of the container inspection log is given in Figure F-4.

The storage area is inspected for proper drum placement and stacking, pallet condition, evidence of leaks, spills or run-on, condition of the concrete floor and dikes, and general housekeeping. If a waste release is observed, it is immediately reported to the supervisor by the inspector.

The containers are inspected for such things as damage or deterioration, properly closed lids, and container labels.

Inspection criteria used for hazardous waste storage containers are specified in on-site documentation and include, but are not limited to, the following:

- ° Hole - An opening in the container (including breach, gouge, leak, or puncture). Any hole is unacceptable.
- ° Dent - A crease, depression, or hollow made by a blow or pressure; a concave distortion. A dent may not exceed 1 inch in depth or 6 inches in length in any two directions. A dent cannot appear fractured, as this can alter the integrity of the container.
- ° Bulge - A swollen area, a convex distortion, or an outward bend. A bulge cannot exceed 1 inch outward from the original container surface.

Any acceptable dents or bulges are marked so that they are closely inspected during subsequent inspections.

Rust spots are touched-up with rust inhibiting paint.

F-2b(2) Tank System Inspection

The FMPC is not seeking a RCRA permit to operate a hazardous waste tank.

F-2b(3) Waste Pile Inspection

The FMPC is not seeking a RCRA permit to operate a hazardous waste pile unit.

F-2b(4) Surface Impoundment Inspection

The FMPC is not seeking a RCRA permit to operate a hazardous waste surface impoundment.

F-2b(5) Incinerator Inspection

The FMPC is not seeking a RCRA permit to operate a hazardous waste incinerator.

F-2b(6) Landfill Inspection

Waste Pit No. 4 is in interim closure and is inspected weekly. The pit will be closed after the Record of Decision (ROD) is issued. Further inspections during the closure and post-closure period will be as stated in the Closure Plan.

F-2b(7) Land Treatment Facility Inspection

The FMPC is not seeking a RCRA permit to operate a hazardous waste land treatment facility.

F-2b(8) Miscellaneous Unit Inspection

The FMPC is not seeking a RCRA permit to operate a miscellaneous hazardous waste unit.

F-2c Remedial Action

Repairs or other steps taken to remediate problems identified during an inspection are recorded on the inspection log sheet. The date and nature of the remedial actions are provided. Deteriorations or malfunctions will be reported to the supervisor and arrangements for prompt, appropriate remediation of the problem will be made.

Repairs will be made in a timely manner so that a situation does not lead to an environmental or human health hazard. Small repairs will be made by plant employees or on-site service personnel. If necessary, outside professional services will be obtained for repairs to instrumentation or systems, such as the telephone/intercom system. Items identified as missing or present in insufficient quantities will be obtained promptly and placed in the proper location. Generally, the remedial response will be to restore an item to proper working order, or to restock an item to ensure the availability of sufficient quantities.

Any leaking, damaged, or rusted container identified during an inspection is replaced with a drum that meets the storage criteria. Overpacking the leaking container into a larger-size container is the preferred method to manage leaking containers. Alternatively, redrumming of the waste can be accomplished by carefully transferring the contents of the damaged drum into another acceptable container.

F-2d Inspection Log

Figures F-3 and F-4 show copies of the inspection logs. The logs include spaces for the name of the inspector, observations, and remedial actions taken. The inspection logs have been designed to readily identify those areas that are routinely checked for acceptability and highlight those conditions which potentially could cause problems. Additionally, an audit of the weekly inspection logs is conducted which summarizes inspection dates, status, remarks, necessary remedial actions, and the date the remedial actions were performed.

F-3 PREPAREDNESS AND PREVENTION REQUIREMENTS

The applicant does not wish to request a waiver of the preparedness and prevention requirements under OAC 3745-54-30 (40 CFR 264 Subpart C).

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Requirements of this Subpart are primarily addressed in: Section D, Process Information; Section F, Procedures to Prevent Hazards; and Section G, Contingency Plan, of this application.

F-3a Equipment Requirements

A detailed discussion of the FMPC emergency equipment and communications systems is provided in Section G-5 of the Contingency Plan.

F-3a(1) Internal Communications

Internal communications from within the Plant 6 Warehouse - Building 79, Pilot Plant Warehouse - Building 68, KC-2 Warehouse, Plant 8 Warehouse - Building 80, Plant 9 Warehouse - Building 81, and future warehouses to the plant proper are conducted by means of a hand-held, two-way radio, which is a requirement to enter the RCRA Storage Warehouses. Emergency assistance can be summoned by using the two-way radio to contact the communication center or in-plant personnel. Interplant phones also are located at various sites throughout the plant as an additional means of communication. The radios and/or phones are immediately available to personnel working at the RCRA waste storage units.

Within any single RCRA storage building, voice communications are used. The 'buddy' system is used for personnel working in the RCRA storage buildings. Because of the sizes and open configurations of the storage buildings, voice communications are adequate to provide immediate emergency instruction to personnel within the buildings.

In addition, the FMPC has an extensive emergency alarm and communications system for notifying employees and emergency

response personnel. This system includes plantwide, ²⁶¹ building, and off-site warning systems.

The plantwide alarm system is centered in the communications center, which operates 24 hours daily. Signals from manual fire alarm boxes and automatic fire monitoring and/or suppression systems located throughout the plant are transmitted to the communications center where alarm bells or air horn signals can be activated. The system sounds special two-digit signals to provide warnings and other emergency information. Following the sounding of a warning signal, a voice message is broadcast to transmit instructions and other important information to FMPC personnel. Locations of manual fire alarm pullboxes within the RCRA waste management units are provided in Appendix G-1 of this permit application.

F-3a(2) External Communications

External telephones are available throughout the plant to contact the communications center. The center can then summon emergency assistance from local police departments, fire departments, or state and local emergency response teams. Hand-held, two-way radios may also be used to contact the communications center or other staff members who, in turn, can contact the communications center to summon off-site assistance.

For emergencies with off-site implications, the off-site emergency warning system warns citizens within a two-mile radius. Activating the sirens alerts residents to seek shelter immediately and tune to a radio or TV station for an Emergency Broadcast System message for information. Detailed information on the emergency alarm system is provided in the FMPC Contingency Plan, Section G, of this permit application.

F-3a(3) Emergency Equipment

Each of the FMPC hazardous waste container storage areas is equipped with supplies, materials, and equipment for responding to emergencies. As discussed in Section F-2, the fire protection, spill control, and decontamination equipment is inspected weekly at each unit as well as the rubber boots and gantry crane.

The facility alarm and communications systems are tested weekly on a plantwide basis. The Emergency Message system is tested daily. Failure of any component of the system results in immediate remedial action or implementation of a back-up system.

The emergency equipment provided at the FMPC is described in detail in the Contingency Plan, Section G, of this application.

Plant 6 Warehouse - Building 79 - Equipment lockers and pails, inside the building (west center section) are used to house spill and fire control equipment. In Plant 6 Warehouse - Building 79, two 10-pound ABC fire extinguishers are wall-mounted at each personnel door and one 10-pound ABC extinguisher is wall-mounted in the riser room. A portable eye wash and body spray safety shower are installed in the west center section of the building.

For spill removal and cleanup, protective clothing, boots, gloves, respirators, and face shields are stored in lockers. Additional equipment and material, shovels, brooms, rags, absorbent materials, etc.--dedicated to hazardous spill cleanup--are also stored within the building.

KC-2 Warehouse, Bays 5, 6, and 7 - Equipment lockers inside each bay (west wall) are used to house spill and fire control equipment. Pails containing absorbent "pigs" are mounted on the west wall in Bay 5 and the east wall in Bays 6 and 7. One 10-pound ABC fire extinguisher is mounted on the outside of the building at the entrances to Bays 5, 6 and 7. A portable eye wash and body spray safety shower are stored (in readiness) in the southwest corner of each bay.

For spill removal and cleanup, protective clothing, boots, gloves, respirators, and face shields are stored in lockers. Additional equipment and material, shovels, brooms, rags, absorbent materials, etc.--dedicated to hazardous spill cleanup--are also stored within the building.

Pilot Plant Warehouse - Building 68 - Equipment lockers inside the building (northeast corner, near the roll-up door) are used to house spill and fire control equipment. One 10-pound ABC fire extinguisher is mounted inside the building at the roll-up door. A portable eye wash and body spray safety shower stands (in readiness) at the northeast corner of the building near the roll-up door.

For spill removal and cleanup, protective clothing, boots, gloves, respirators, and face shields are stored in lockers. Additional equipment and material, shovels, brooms, rags, absorbent materials, etc.--dedicated to hazardous spill cleanup--are also stored within the building.

Plant 8 Warehouse - Building 80 - This warehouse contains equipment lockers and pails to house spill and fire control equipment. Two 10-pound ABC fire extinguishers are mounted inside the building at each personnel door and one 10-pound ABC fire extinguisher is mounted in the riser room. A portable eye

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wash and body spray safety shower is located in the center section of the building.

For spill removal and cleanup, protective clothing, boots, gloves, respirators, and face shields are stored in lockers. Additional equipment and material, shovels, brooms, rags, absorbent materials, etc.--dedicated to hazardous spill cleanup--are also stored within the building.

Plant 9 Warehouse - Building 81 - This warehouse contains equipment lockers and pails inside the building to house spill and fire control equipment. Two 10-pound ABC fire extinguishers are mounted inside the building at each personnel door and one 10-pound ABC fire extinguisher is mounted in the riser room. A portable eye wash and body spray safety shower is provided in the center section of the building.

For spill removal and cleanup, protective clothing, boots, gloves, respirators, and face shields are stored in lockers. Additional equipment and material, shovels, brooms, rags, absorbent materials, etc.--dedicated to hazardous spill cleanup--are also stored within the building.

Proposed RCRA Warehouse is in the design stage. It will contain equipment lockers and pails inside the building to house spill and fire control equipment. Two 10-pound ABC fire extinguishers will be mounted inside the building at each personnel door and one 10-pound ABC fire extinguisher will be mounted in the riser room. A portable eye wash and body spray safety shower will be stored (in readiness) in the center section of the building.

For spill removal and cleanup, protective clothing, boots, gloves, respirators, and face shields are stored in lockers.

Additional equipment and material, shovels, brooms, rags, absorbent materials, etc.--dedicated to hazardous spill cleanup--are also stored within the building.

Proposed Building 83X Storage Warehouse This warehouse is also in the design stage. The warehouse will be equipped with spill response, fire response, and personnel protection described above for the other RCRA hazardous waste storage units.

F-3a(4) Water for Fire Control

An Extra Hazard, Group 1, dry-pipe fire sprinkler system is installed in the Plant 6 Warehouse - Building 79, KC-2 Warehouse, Plant 8 Warehouse - Building 80, Plant 9 Warehouse - Building 81, and will be installed in the proposed warehouses, that is capable of supplying water at a minimum pressure of 100 psi to the sprinkler headers. The sprinkler heads are activated by detection of temperatures above a predetermined level.

The Pilot Plant Warehouse - Building 68 does not have a sprinkler system because it is used to store noncombustible, liquid-free waste only.

Water for fire control is also provided from hydrants near the hazardous waste storage buildings. Detailed descriptions of the FMPC water supply and fire hydrant locations are provided in Section G-5a of the FMPC Contingency Plan. The FMPC fire-fighting capabilities are also discussed in the Contingency Plan.

F-3b Aisle Space Requirements

An aisle space of no less than 3 feet is maintained between pallets to allow the unobstructed movement of personnel, fire protection

equipment, and spill control equipment. A 3-foot aisle is maintained around the perimeter between the pallets and the building wall, and between the pallets and the curbs.

The 3-foot aisle space is adequate in the Plant 6 Warehouse - Building 79, the KC-2 Warehouse, the Plant 8 Warehouse - Building 80, and the Pilot Plant Warehouse - Building 68 for the following reasons:

- ° The necessity for external fire fighting equipment to enter the Plant 6 Warehouse - Building 79, KC-2 Warehouse, and the Plant 8 Warehouse - Building 80 is minimized because a fire sprinkler system is installed in each.
- ° The warehouses are used to store drums until they are removed for disposal. The warehouses are not active warehouses where drums are moved in and out continually.
- ° The aisles are adequate for personnel to inspect drums for leaks and deterioration.
- ° A gantry crane is used to move and remove drums. Motorized equipment is not required to move up and down the aisles.
- ° The Pilot Plant Warehouse does not store combustible materials requiring external fire fighting equipment.

Aisle space requirements for Plant 9 Warehouse - Building 81 and the Proposed RCRA and Building 83X Warehouses will be addressed when the designs are completed. Sufficient aisle space will be provided to meet the regulatory requirements.

F-4 PREVENTIVE PROCEDURES, STRUCTURES, AND EQUIPMENTF-4a Unloading Operations

Within 72 hours after a hazardous waste container has been filled, labeled and sealed, it is transferred to a RCRA storage building via fork lift or trailers. The drums are unloaded and moved into the storage area via ramps and fork lifts. At the Plant 6 Warehouse - Building 79 drums can be unloaded directly from eighteen-wheel tractor trailers via an adjustable dock or unloaded from small dolly/trailers via fork lift equipment.

RCRA waste may be loaded onto trucks or unloaded from trucks at either the Plant 1 or Plant 6 Warehouse - Building 79 receiving or unloading docks.

In case of emergency, a mobile dock is available. The Plant 1 dock serves as the main dock for transfer of materials and wastes shipped to and from the FMPC. For shipment to an off-site disposal facility, the drums are removed from the storage warehouse and loaded directly onto a truck transport via the loading docks at Plant 1 or Plant 6 Warehouse - Building 79 by means of fork lifts. The drums are loaded onto the trucks individually using a forklift drum-handling tool. To minimize the potential for accidents involving other vehicles and pedestrians, traffic flow is limited around the loading area during operations. No additional loading or unloading operations are permitted at a dock when hazardous wastes are loaded or unloaded. Inspection requirements for drums prior to shipment and during storage are provided in Sections D-1 and F-2, respectively. The loading/unloading areas are inspected daily when in use.

Traffic information and example traffic patterns for the FMPC are discussed in Section B-4 of this permit application. In the event

of an accidental spill of hazardous materials in transport or loading/unloading operations, due to such causes as:

- ° accidental puncture or upsetting of a container by a fork lift operator,
- ° accidental dropping and rupture of a container, or
- ° leakage from a container due to deterioration,

plant operating and security personnel have been instructed to give emergency notification of the location of the spill to the active shift foreman and/or utility engineer (AEDO). The FMPC Contingency Plan, Section G of this application, provides specific emergency notification and response procedures.

Cleanup of released wastes from such areas as floors, road, pavement, ground, earth, stone filling, etc., will be managed as discussed in Section G-4d of the Contingency Plan.

F-4b Run-Off

Contaminated run-off from the hazardous waste drums is unlikely since the waste containers are enclosed within the storage buildings.

Plant 6 Warehouse - Building 79

In the Plant 6 Warehouse - Building 79, 6-inch curbs encircle the RCRA storage containers to prevent RCRA contamination of the soil and intermixing of incompatible wastes. These same curbs prevent rainwater from reaching the storage area if the doors are left open, and they also prevent the material within the storage area from leaving the building and contaminating the soil. Plugged trench

drains prevent any liquid from leaving the building via the drainage system.

To further prevent contamination, the concrete slabs and landscape around the warehouse slope away from the Plant 6 Warehouse, thus preventing rainwater from entering the building.

KC-2 Warehouse, Bays 5, 6, and 7

In the KC-2 Warehouse, Bays 5, 6, and 7, 6-inch curbs encircle the RCRA storage containers to prevent not only RCRA waste from contaminating the soil and endangering human health, but also to prevent intermixing of incompatible wastes from accidental spillage or leaky drums. These same curbs prevent rainwater from reaching the storage area if the doors are left open and they also prevent the material within the storage area from leaving the building and contaminating the soil. Tarps cover the fences on the north and south ends of the warehouse to prevent a driving rain from striking the drums. To further prevent contamination, the concrete slabs and landscape around the warehouse slope away from the building to prevent rainwater from entering.

Pilot Plant Warehouse - Building 68

The Pilot Plant Warehouse - Building 68 is used for storage of only hazardous wastes with no free liquids. Since the hazardous waste drums stored in the warehouse do not contain any liquids, no liquids are available to flow out of the building and contaminate the soil or endanger human health. Rainwater is prevented from entering the warehouse by concrete slabs and landscapes which slope away from the building.

The Plant 8 Warehouse - Building 80 is used to store only hazardous waste with no free liquids. In front of each door is a grated trench connected to a sewer drain to prevent rainwater from entering the building and coming into contact with the drums. Since only liquid-free hazardous waste is in the warehouse, no liquid can flow out. To further prevent contaminated run-off and rainwater from entering the building, the concrete slab and landscape around the warehouse are sloped away from the building.

The Plant 8 Warehouse - Building 80 has 6-inch curbs which encircle the RCRA storage containers to prevent mixing of incompatible wastes. The curbs prevent rainwater from reaching the storage area if the doors are left open, and they also prevent any material spilled within the storage area from leaving the building and contaminating the soil. Plugged trench drains prevent any liquid from leaving the building via the drainage system.

Plant 9 Warehouse - Building 81

The Plant 9 Warehouse - Building 81 stores RCRA waste in four curbed areas. The curbs prevent rainwater from reaching the drums in the storage area. They also prevent hazardous waste liquid from flowing from the storage area to the outside of the building. To further prevent run-off, the concrete and landscape around the warehouse are sloped away from the building. The drains in the warehouse are plugged to prevent contamination of the drain system.

Proposed RCRA Warehouse

The proposed RCRA Warehouse is being designed to handle all types of RCRA waste. A curbed area will encircle the waste containers. This curbing will confine the waste to the storage area proper and prevent

contamination of the water supply due to run-off. To further prevent contamination, the concrete slabs and landscape around the exterior of the building slope away from the warehouse.

Proposed Building 83X Storage Warehouse

The Proposed Building 83X Storage Warehouse will be designed to prevent run-off from the hazardous waste container storage areas. Curbing will be used to provide secondary containment and surrounding landscaping and surfaces will be sloped away from the building.

F-4c Water Supplies

Contamination of water supplies by hazardous wastes or hazardous waste constituents is prevented by storing the hazardous waste drums in enclosed buildings and by preventing any run-off as described in Section F-4b.

The Plant 6 Warehouse - Building 79 and Plant 9 Warehouse - Building 81 have plugged trench drains to prevent hazardous waste contamination of the drain system and possible entry into the water supply.

The KC-2 Warehouse, Bays 5, 6, and 7, and the Pilot Plant Warehouse - Building 68 do not have any drains.

The material stored in the Plant 8 Warehouse - Building 80 contains no free liquids thereby minimizing the potential for any spilled waste to migrate from the spill location. After the warehouse is modified to be in compliance for storing all types of RCRA waste, curbs will encircle the storage containers and the trench drains will be plugged. This action will prevent liquids from leaving the building through the doorways or the drainage system and contaminating the water supply.

The concrete slabs and soil around the buildings slope away from the warehouses and prevent rainwater from entering the buildings.

The proposed Warehouse - Building 83X will be designed in such a way so as to minimize the potential for contamination of water supplies.

F-4d Equipment and Power Failure

The only equipment involved in handling materials are fork lift trucks, barrel stackers and gantry cranes. In the event of a mechanical failure of the fork lift and/or barrel stacker, a replacement is immediately available. The gantry crane is not susceptible to failure, but if one should occur, the crane would have to be repaired.

In the event of a power failure at the storage units, operations will be suspended until the electric power is restored. Portable generators are available in case of emergencies. Only explosion-proof generators are permitted in areas where ignitable wastes are stored.

F-4e Personnel Protection Equipment

Personnel exposure to hazardous waste is minimized through the use of protective equipment, stored in each warehouse, as well as by safe handling practices. The protective equipment appropriate for employees working in the storage building is specified by the Operations Supervisor and the Quality and Safety Group and includes coveralls, boots, gloves, face shields, and respirators.

All personnel involved in management of RCRA-hazardous wastes are given training in the use of protective equipment and the proper handling of RCRA wastes. Annual fit-testing of respirators and RCRA

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refresher training are also provided, as described in Section H of this permit application.

F-5 PREVENTION OF REACTION OF IGNITABLE, REACTIVE AND INCOMPATIBLE WASTES

F-5a Precautions to Prevent Ignition or Reaction of Ignitable or Reactive Wastes

To minimize the possibility of ignition of ignitable or reactive wastes, hazardous waste handling personnel are properly trained to reject leaky, suspicious, deteriorated, or otherwise unacceptable containers of waste. A drum Condition Checklist is provided in Section D of this application and serves to guide waste handlers in the proper acceptance and storage criteria for waste containers. Wastes are only acceptable if placed in compatible drums meeting DOT requirements. Moreover, while containers are being stored, they remain closed and sealed unless a sample is being collected.

The waste container storage areas are inspected weekly so that any leaks or spills are cleaned up immediately, reducing the possibility of adverse reactions. Any suspect or leaky container is transferred to an 80 gallon overpack recovery drum.

The waste containers are stored in areas which are protected from accidental ignition sources. Smoking is not permitted in these areas, and "NO SMOKING" signs are conspicuously posted. The entire plant is a "No Smoking" area except for designated (posted) break areas.

Containers of waste are moved in/out of the storage areas by forklift units rated for service in a Class I Division II area. Each unit is equipped with a certification plate.

FMPC receives ignitable wastes from the RMI Extrusion Plant and also generates ignitable wastes on-site (e.g., paint thinners). Accurate identification of wastes at the source of generation (laboratory analyses, process knowledge gained through analyses, experience and/or the literature) insures that wastes can be managed to prevent fires or releases of waste constituents. No reactive wastes are managed at the FMPC site.

Potential sources of ignition include:

1. Smoking paraphernalia - cigarettes, cigars, pipes.
2. Open flames - welding torches, heaters, cigarette lighters.
3. Sparks, static electricity.
4. Lightning.

To prevent fires and/or the release of waste constituents, the following precautionary measures are enforced:

1. All waste containers are color coded to identify the type of RCRA material in the container and ensure the ignitable and reactive wastes are appropriately stored. Inspection procedures relative to this issue are addressed in Section F-2.
2. Approved work permits are required before any welding is performed.
3. Surveys for combustible gases and vapors are performed by the Industrial Hygiene and Safety Department before any work involving ignition (open flames, heating elements, etc.) can be started.

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4. "NO SMOKING" and "OPEN FLAME" signs are conspicuously placed at the entrances to the storage buildings.
 5. Non-sparking tools are used in the storage units with ignitable waste present.
 6. If a fire should occur, a dry pipe sprinkler system is installed to contain the blaze. Hand-held, wall-mounted fire extinguishers are available to put out smaller incident stage fires.

The following incompatible waste types are represented on the FMPC Hazardous Waste Color Code System:

Group A (red)

Flammable liquids
and solids

Group C (green)

Corrosive liquids or solids
which are acidic

Group B (white)

Oxidizers

Group D (blue)

Corrosive liquids or solids
which are caustic

Group A cannot be mixed with Group B or Group C.

Group B cannot be mixed with Group A or Group D.

Group C cannot be mixed with Group A or Group D.

Group D cannot be mixed with Group B or Group C.

The methods used to determine reactivity and ignitability are:

reactivity -- There are no reactive substances on site.
If required, reactivity is determined by the method described in Section C.

ignitability -- Determined by the Pensky-Martins closed cup tester.
(SW 846 EPA Method 9090)

F-5b General Precautions for Handling Ignitable or Reactive Wastes and Mixing Incompatible Wastes

As noted in the Waste Analysis Plan, Section C of this permit application, a waste container stored at the FMPC remains closed at all times during storage and may be opened only when a sample must be obtained. No treatment or mixing of wastes is done by this facility. As such, accidental ignition or mixing of ignitable or incompatible waste types is highly unlikely.

Because standard operating procedures for the storage and handling of hazardous waste do not include treatment or mixing of wastes, accidents that are likely to result in any of the following conditions do not occur at this facility:

1. Generation of extreme heat or pressure, fire or explosions, or violent reactions
2. Production of uncontrolled flammable fumes, dusts, or gases insufficient quantities to threaten human health or the environment
3. Production of uncontrolled flammable fumes or gases in sufficient quantities to pose a risk of fire or explosions
4. Damage to the structural integrity of the device or facility

5. Creation of threats to human health or the environment.

F-5c Management of Ignitable or Reactive Wastes in Containers

Ignitable and reactive wastes are not stored in the same container at the FMPC. All of the waste container storage areas are located at least 50 feet from the FMPC property line.

The system followed at the FMPC incorporates roofed buildings that have concrete floors (impervious) and metal siding (Plant 6 Warehouse - Building 79, Pilot Plant Warehouse) or cinder-block walls and chain-link fences (KC-2 Warehouse, Bays 5, 6, and 7). Plant 6 Warehouse - Building 79 and the KC-2 Warehouse, Bays 5, 6, and 7 have continuous 6 in. x 6 in. curbs (diking). The curbed areas are capable of handling 10 percent of the total volume stored in each bay. The Pilot Plant Warehouse - Building 68 has a curbed area which contains only waste without free liquids. Containment capacities of the storage areas are discussed in Section D-1a(3)(c).

All drums are stored on pallets (4 ft. x 4 ft. x 4 in.). The pallets elevate the drums 4 in. off the floor and eliminate any spilled liquid coming into contact with the drums. Spilled liquids are removed by using absorbent material and absorbent pads. Larger spills are removed from the floor by using a vacuum type cleaner. Spilled wastes, spill residues, and cleanup materials are containerized and stored on-site in accordance with procedures described in this permit application.

Inspections performed on a weekly basis, audits conducted at varying intervals and surveillances are used in addition to the above techniques to ensure the proper management of wastes in containers. Inspection procedures are discussed in detail in Section F-2.

As discussed in the previous section, a color coding system has been developed to control the compatibility of storage of various wastes in the same curbed area. The system incorporates "color code signs"

supported by structural steel columns in each curbed area. Only drums having color codes matching the "color code signs" are permitted to be stored in that area.

Ignitables are stored at least 50 feet from the FMPC property line and are limited to a stacking height of only one drum high.

F-5d Management of Incompatible Wastes in Containers

Plant personnel responsible for the management, transfer and storage of hazardous waste at the FMPC are thoroughly trained in proper waste handling procedures. Waste containers are approved for storage only after confirmation that the containers are closed and sealed. Once received, further handling of waste materials in drums is not necessary and therefore, incompatible wastes are not put into the same container. Unwashed containers are not used in storage and transfer operations.

Each individual warehouse is divided into separate curbed areas or bays. The types of material to be stored in these bays is identified by a "color code sign" hanging from a structural beam in each bay. This "color coding" facilitates the weekly inspection process and eliminates storing incompatible wastes within the same curbed area. Separation of the storage areas by curbs prevents mixing incompatible wastes when a leak or spill occurs.

F-5e Management of Ignitable or Reactive Wastes in Tanks

This section applies to hazardous waste management units not applicable to the FMPC.

F-5f Management of Incompatible Wastes in Tanks

This section applies to hazardous waste management units not applicable to the FMPC.

F-5g Management of Ignitable or Reactive Wastes Placed in Waste Piles

This section applies to hazardous waste management units not applicable to the FMPC.

F-5h Management of Incompatible Wastes Placed in Waste Piles

This section applies to hazardous waste management units not applicable to the FMPC.

F-5i Management of Incompatible Wastes Placed in Surface Impoundment

This section applies to hazardous waste management units not applicable to the FMPC.

F-5j Management of Ignitable or Reactive Wastes Placed in Landfills

This section applies to hazardous waste management units not applicable to the FMPC.

F-5k Management of Incompatible Wastes Placed in Landfills

This section applies to hazardous waste management units not applicable to the FMPC.

F-5l Management of Ignitable or Reactive Wastes Placed in Land Treatment Units

This section applies to hazardous waste management units not applicable to the FMPC.

F-5m Management of Incompatible Wastes Placed in Land Treatment Units

This section applies to hazardous waste management units not applicable to the FMPC.

ACCESS REQUEST

Date: _____

- INITIAL ACCESS REQUEST
- EXTENSION OF CURRENT ACCESS
- VISITOR HAS PREVIOUSLY HAD A PICTURE BADGE AT THIS SITE—
FORMER BADGE NO.: _____

TO BE COMPLETED BY RECEPTIONIST

BADGE NUMBER ISSUED: _____

VISITOR INFORMATION			
VISITOR:	NAME: LAST:	FIRST	MIDDLE INITIAL:
	<input type="checkbox"/> U.S. Citizen		
EMPLOYED BY:	COMPANY NAME:		COMPANY TELEPHONE NO.:
	ADDRESS: STREET:		CITY: STATE: ZIP CODE:
PURPOSE OF VISIT:			
* AREA(S) TO BE VISITED:			
EMERGENCY CONTACT:	NAME:		PHONE NUMBER:
	RELATIONSHIP:		()
DATE(S) OF VISIT:	_____ THROUGH _____		
ESCORT NAME(S):			

The escort has been informed that the visitor(s) has not been granted Access Authorization by the United States Department of Energy and that access to Classified Information is prohibited.

BIOASSAY			
SAMPLE NUMBER:	SAMPLE DATE:	SAMPLE TIME:	RESULT:

* Will the visitor be entering the process area?

YES NO

FOR DOSIMETRY USE ONLY

Skin _____

Whole body _____

Radiation type _____

J.	DISTRIBUTION OF COPIES
1	Original, Security Office (RECORD COPY)
2	Dosimetry Subsection Records
3	Invivo Subsection Records

(AUTHORIZED SIGNATURE)

(PHONE EXTENSION)

(SECTION)

(DEPARTMENT)

Socsec # 00000000 Badge # Barcode #
 Name First Middle
 Address
 City, State, Zip Phone
 Birth Date Sex Sal/Wag Clearance
 Section Dept
 Classification Location/Code
 Supervisor EmpStatus
 Citizen DOE # Badge Exp Date
 Hire Date

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Enter new data and press enter or correct field

1 2 3 4 1 13 5 6 7 8 MAIN MENU
 c

Company

Address

City, State, Zip Phone

EMERGENCY CONTACT INFORMATION

Name

Relationship

Phone

Enter company data and press enter

1 2 3 4 3 24 5 6 7 8 MAIN MENU
 c

RCRA BUILDING INSPECTION LOG

Inspector Name: _____ Inspector Badge No.: _____

ITEM NUMBER	INSPECTION ITEM	STATUS		CORRECTIVE ACTION REQUIRED	DATE & DESCRIPTION OF REPAIR
		ACCEP-TABLE	UNACCEP-TABLE		
1	Security/Locks				
2	Curb Condition				
3	Floor Condition				
4	Aisle Width				
5	Roof Condition				
6	Communication Device				
7	Signs:				
8	Authorized Personnel				
9	No Smoking				
10	Emergency Eyewash & Shower				
11	Other (List)				
12	Fire Extinguisher				
13	Eye Wash				
14	Emergency Shower				
15	Spill Response Equipment:				
16	Recovery Drum				
17	Absorbent Pad				
18	Hazardous Material PIG				
19	Absorbent, Granular				
20	Leather Palm Gloves				
21	Rubber Gloves				
22	Shovel				
23	Broom				
24	Coverall, Disposable				
25	Electrical Power				
26	Maintenance Supplies:				
27	Hazardous Waste Label				
28	65 Card				
29	Spray Paint				
30	Certified Torque Wrench				
31	Clear Envelope				
32	Stencil Set				
33	DOT Labels				
34	68/69 Card				

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Comments: _____

INSPECTOR'S SIGNATURE _____ DATE _____

SUPERVISOR'S SIGNATURE _____ DATE _____

RCRA CONTAINER STORAGE INSPECTION FORM

..PC

Inspector Name: _____ Inspector Badge No.: _____

Location: _____ Date: _____ Time: _____

	MCIA INVENTORY NUMBER	FMPC LOT NUMBER	CHEMICAL NAME	RCRA ID NUMBER	DOT ID NUMBER	MCIA COLOR CODE	ACCUM. DATE DD/MM/YR	REMEDIATION/DATE CORRECTED
CORROSION								
PAINT PITTING								
DENTED								
CLEAN DRUM								
DRUM CLOSED								
PALLET STRENGTH								
LABEL SECURE								
LABEL VISIBLE								
DRUM HAS COMPATIBLE ARRANGEMENT								
WASTE * RELEASE TO ENV.								
OTHER:								

* Notify Supervisor immediately if the answer is yes.

Comments: _____

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INSPECTOR'S SIGNATURE _____ DATE 26/1

SUPERVISOR'S SIGNATURE _____ DATE